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CENTENARIANS. THE SYNDROME OF NORMAL SENILITY

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One of the outstanding members of the course for Displaced Physicians which Drs. Alex M. Burgess, Sr., and Peter Pineo Chase, of Providence, R. I. helped to conduct at Munich, Germany, in the summer of 1948, was Ivan Basylewicz, M.D. Although suffering at the time with multiple boils, he attended all the lectures, took an unusually active part in the discussions, and was evidently a leader. Nevertheless, he was a small, quiet, modest-appearing gentleman. He showed the typewritten summary of his unpublished book, a study of nonagenarians and centenarians. The English was strangely idiomatic, and therefore difficult at times. Dr. Burgess has changed it to a form less bizarre and amusing, but more easily to be understood by our readers.

—THE EDITOR

MANY YEARS ago my well-remembered teacher, Professor Theoph. Janowski, expressed his belief that as a rule the state of health of the elderly does not accurately correspond to their calendar age. I, myself, have come to the conclusion that frequently octogenarians are sounder and stronger than are some individuals who are between 55 and 65 years of age. This I have considered to be due to the fact that such individuals in reaching advanced age have escaped various disease processes commonly seen in the elderly which have been usual causes of what we may call premature death in the second half of human life.

Therefore, having recently devoted my attention especially to the scientific study of the clinical conditions of normal and pathological old age, I have paid particular attention to centenarians as representatives of extreme senility. It is hardly necessary to point out that previous studies of such individuals, both by physiologists and physicians, have not been made with sufficient thoroughness, probably because such people are not easy to find. It was my good fortune, however, to be able with my coworkers during a period of years before the outbreak of World War II, to complete the investigation of 72 such very elderly individuals to whom the term "macrobiotes" may be applied. They can be classified as follows:—

	Nonagenarians	*Centenarians*
Male	14	32
Female	24	2

The records of all our observations (part of which have been published in Ukranian and Russian) are summed up in my book "Centenarians: The Syndrome of Normal Senility" (1944-46). Unfortunately it has as yet been impossible to publish this book. In this present article I wish to present a short resumé of the principal thesis of my book.

Preliminary Remarks

I must confess that an age of one hundred years had always been associated in our minds with the development of considerable alterations in the human organism. We had expected to find old people in whom life was hanging, as it were, by a thread, people who had reached a state of marked debility and marasmus and were pale shadows of the past—accidentally preserved to the present day. We were therefore very much astonished when, on meeting with people of so advanced an age, we have found ourselves able to converse freely with them and to listen to detailed accounts of events in the remote past. The remarkable memory, clear mentality, interest in their surroundings, moderate ability to work, and the enjoyment of life shown by these "macrobiotes," were quite striking. This agreed with their external appearance which did not at all correspond to their advanced age. Almost all of them looked relatively young, very little different in some instances from the average well-preserved person of 70.

Medical examination did not reveal any signs or symptoms of infirmity in the vast majority of our "macrobiotes." Only 19 of them (26 per cent) could be considered as not quite healthy individuals because of some evidence of one or another senile

continued on next page

condition. Nine of them (12 per cent) were definitely ill and three were in a pitiful state of senile marasmus. With the exception of these cases the "macrobiotes" whom we studied were free from the clinical manifestations of such diseases as: arteriosclerotic lesions of every kind, senile Parkinson's disease (mesencephalosis), pulmonary emphysema with all possible complications, osteoporosis and calcification of the cartilages and tissues (processes of transmineralization), arcus senilis, hypertrophy of the prostate etc.,—conditions which are commonly considered as unavoidable attributes of senility. No evidence of residual lesions, the consequences of various diseases of the past, could be found in these old people. All except 9 felt well, satisfied with their state of health and, in point of fact, in no need of medical attention whatever. On the basis of the records of our medical examinations we were forced to conclude that most of the "macrobiotes" observed were quite healthy subjects and could really be considered as true examples of physiological senility.

It is important to mention that in the past these people have, as a rule, been distinguished by good health, robust constitution, endurance and considerable muscular strength. With a few exceptions they have very seldom been ill during their whole long lives. Some of them asserted that illness had been quite unknown to them. Most of them had been villagers and agricultural workers, whose daily lives were characterized by continuous and severe physical work. The great majority had not lived under conditions of abundance and prosperity. A deliberate attempt to attain a very old age, following the advice of other "macrobiotes", was admitted by a few centenarians only. As a rule they did not follow an "aurea mediocritas." On the contrary they asserted that their mode of life did not differ much from that of "other people." With a few exceptions they have been passionate smokers and not given to refusing alcohol. Furthermore they have not been vegetarians.

In almost all instances these people had beeen married, usually more than once, and had many descendants—children, grand-children, great grandchildren and great-great grand-children. In some instances 100 year old men asserted that they had been distinguished in the past by considerable sexual ability and that even at their advanced age had not entirely lost all erotic interest in females nor all sexual power. In the majority of cases, however, such power had disappeared long ago. In the long-lived women the menopause had occurred as a rule between the ages of 45 and 55 years. In general we were unable to discover any close relationship between the psycho-sexual behavior of the "macrobiotes" and their state of health.

Finally it should be mentioned that the heredity of the old people whom we studied was quite favorable. According to their statements their parents also were successful in reaching a very advanced age (in 75 per cent) and also their grand-parents (in 50 per cent of them). There were also many instances of longevity in other members of their families.

Fundamental Phenomena of Normal Senility

Despite their relatively good general condition and the lack of obvious degenerative disease noted in these very old people more thorough examination revealed a number of peculiar changes, which may be interpreted as evidence of their advanced age. It became apparent that the years had made an indelible impression. To begin with, we noted a general ubiquitous involution which can be considered as a sort of dominant leitmotiv in the development of senile metamorphosis. A great deal of evidence of this was noted in the group under observation.

From the clinico-anatomic point of view the following changes are worth noting. (1) Considerable atrophy especially involving the integuments (skin and mucous membranes) and also the subcutaneous fat and the muscles. (2) Evident diminution in the ability of cellular tissues to proliferate. This was especially well demonstrated in a study of the cellular elements of the blood. (3) A diminution of the size of the cellular nucleus giving a definite decrease in the ratio between the diameter of the nucleus to the diameter of the cell. This was noted, for example, in the monocytes. (4) Pronounced pigmentation of the skin. We may perhaps be able to assume by analogy that pigmentation was increased in other tissues as well. (5) Atrophy and partial disappearance of elastic tissues probably in the skin, subcutaneous tissues and lungs and markedly in the aorta and larger arteries. (6) A preponderance of ordinary connective tissue in the walls of the larger and the smaller blood vessels. (7) Diminution in the blood supply of the tissues with demonstrable reduction in the capillary network and the obliteration of many capillaries. (8) The occurrence of senile cardiac atrophy. (9) Senile atrophic pulmonary emphysema. (10 Considerable visceroptosis with elongation of the colon due to connective tissue weakening and muscular relaxation in the abdominal wall. (11) Atrophic changes in the intervertebral cartilages with the development of senile kyphosis and a diminution in body length especially involving the trunk. With this there was associated atrophy of the alveolar processes of the jaws especially the lower jaw. (12) Considerable loss of weight.

From the clinico-physiological point of view it is important to note the following. (1) Mental and vegetative calm. (2) Considerable decrease in the basal metabolic rate. (3) Decrease in the sensations

of hunger and thirst with a diminished consumption of food and water. (4) Normal body temperature (an absence of disturbances of thermo-balance). (5) A low level of protein metabolism. (6) A decrease in the albumen/globulin ratio in the plasma (and probably in the tissue fluids). (7) A dehydration of the body with a diminution of both renal and extra-renal fluid loss. (8) Accumulation in the blood of various unrelated substances, for example, globulins, cholesterol and glycogen. (9) Diminished ability to store nutritional reserves in the usual organ-depots. (10) Diminished external secretion of certain glands, for example, the glands of the skin and of the stomach wall, perhaps also the acinal tissue of the pancreas. (11) Generally decreased functional excitability. Diminished sensibility and weakening of reflexes both unconditioned and conditioned. (12) General decrease in the perfection of the action of the auto-regulatory mechanisms of the body. (13) Diminished reserve forces of the organism. (14) A functional inferiority of the principal physiologic systems of the organism. (15) Weakened ability to meet increased load.

The records of our investigations forced us to conclude that the colloids in the cells, intercellular substances and the various body fluids, had "grown old" in the bodies of these elderly individuals whom we had studied. There had occurred a senile hysteresis with diminution of surface, dispersion, hydrophyllia, permeability and the ability of absorption. The inevitable alterations by aging which occurred in the colloids played a very important but not an essential part, we believe, in the background of the development of the morphological and functional metamorphoses which we have described.

Observations on Tissues, Organs and Systems

There follows a report of the detailed findings. These reveal a number of typical changes which may be considered as specific for normal senility. Such matters as the body systems, organs, functions, etc., are discussed. The more important aspects are elaborated in the other parts of the paper and lack of space forces us to leave out this section. It will be included in the reprints.

Editor

Discussion

Summarizing the records of our investigations I conclude that the functional ability of the principal organs and systems of the very aged, as well as the course of the various metabolic processes, exhibits many peculiarities which do not occur in young or middle-aged people. We should, I believe, consider them to be the typical attributes of normal senility—unmodified by any disease. We should regard such normal senility as the terminal stage of post-natal ontogenesis with many unavoidable consequences of continuous wear and tear the result of the long life itself. As a matter of fact all these senile metamorphoses did not cause the appearance of any significant disorders such as would threaten life. Although one or another organ or system was found in very advanced old age to show an evident decrease in activity, nevertheless they were all quite sufficient to satisfy the diminished requirements of the aged body. In fact a definite inferiority of all of them, the result of senile metamorphosis, appeared to be in good correlation with the general involution of the body in toto. Therefore we are entitled to believe that all the structural and functional changes which have been described in advanced senility are not to be considered abnormalities of a definitely pathological character.

As regards external signs, the evidences of senile metamorphosis, that we have described, were striking, for example, the parchment-like skin, the loss of turgor of the integuments, the marked kyphosis with a considerable decrease in height as well as weight and obvious muscular atrophy and sluggishness. In addition a definitely senile appearance of the features were noted, with thin gray hair, sometimes of a peculiar pale yellowish-green shade, and many deep wrinkles—truly furrows of time—and also a high forehead, hollow eyes, a sunken mouth and atrophic lower jaw and finally relatively very large nose and ears. At the same time, however, one observed the expressiveness of the faces and the gesticulations of these "macrobiotes", and especially their youthful eyes, in striking contrast to the signs of senility.

Important changes in the bones were noted, and particularly in the cartilages, including intervertebral disks, the alveolar processes of the jaws and the cartilages of the joints of the lower extremities, in short in the parts subjected to constant strain during life and, it is to be assumed, under the greatest functional demand. In this connection the somato-metrical examination yielded interesting data, for a marked decrease in the length of the trunk compared to the total height, a decrease in the length of the face in comparison to that of the whole head, short legs but rather long arms, etc., but, at the same time, evidence of osteoporosis and even of slight decalcification in most of these old people was absent as were clinical or radiological signs of articular or periarticular disorders such as arthritis deformans or spondylosis. There was not even found a tendency to fractures which is usually considered to be so typical of the elderly. The rib cartilages, except the first pair, were not calcified in the "macrobiotes" studied. Therefore abnormal rigidity was not noted except in a few cases.

From the clinical standpoint it is hardly necessary to emphasize the importance of the absence of these changes. It should be remembered that

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one customarily considers them as common findings in the second half of human life. Fundamentally, then, the fact that the skeletons of these very aged individuals, the bony structure and articulations, had undergone but slight changes, may be considered as a necessary premise to the fact of their continued independent vitality. In spite of the atrophy and perhaps the early degeneration of the muscles (the diminution of the neuro-muscular chronaxie and the rise of the rheobase) with the evident decrease in muscular power, these "macrobiotes" had not lost entirely their ability to do normal work or to take rather long walks.

We also were able to observe that their ability to masticate was only slightly diminished. The atrophy of the jaws and the absence or poor condition of the teeth did not hinder them in this respect, and many of them could eat rather solid foods when most of their teeth were gone. Furthermore it is worth noting that their digestive processes proceeded in quite a satisfactory manner, except for the common occurrence of constipation, in spite of visceroptosis, dolichocolia, and both motor and secretory hypofunction of the gastro-intestinal tract. It was apparent that the functional ability of their digestive apparatus was quite sufficient for them in view of their decreased metabolic needs and the associated diminution in the consumption of food. Despite the universal decrease in appetite among them they still preserved their ability to taste and enjoy food, which is commonly regarded as "the last tie to life of old people."

Our particular attention was naturally devoted to the study of the circulation in marked senility. We were forced to recognize in "macrobiotes" a characteristic senile cardiopathy—the atrophic old heart with involutional arterio-fibrosis and capillary degeneration with a rather typical semiotic picture. However interesting the details of this latter condition may be, it is quite impossible to include them in a brief article such as this. Suffice it to say that our observations revealed much evidence that the circulation of these individuals was a low-standard one. Yet, strictly speaking, no alterations of a definitely pathological character could be demonstrated. The hemodynamic findings, especially the decreased in cardiac output, cardiac index and stroke volume, showed without any doubt that the functional ability of the whole cardiovascular apparatus was reduced. The amount of blood ejected by the cardiac ventricles into the arterial channels with each systole in a unit of time was considerably diminished as was the rate of contractions. Nevertheless, there could be observed in "macrobiotes" no signs of definite or latent heart failure of any kind:—right or left-sided cardio-vascular insufficiency, coronary disease, atrial lesions (auricular flutter or fibrillation) or abnormalities of conduction (heart block). The electrocardiographic records, though very peculiar, very seldom indicated the presence of definite myocardial lesions. In the same way auscultation did not in many instances reveal evidence of organic damage. In seventy-five per cent of the cases the blood pressure was within normal limits. If we adopt the common standard of 100 plus the age as the upper limit of normal for the centenarians it would be 200 mm. of mercury, a figure which was not found in our group. Thus, in view of the generally normal blood pressure findings we may say that the hearts of these people were not subjected to the strain of overcoming increased arteriolar resistance.

I wish to call particular attention to the definite diminution in blood volume in these individuals probably because of the involutional reduction in the total vascular bed. Accordingly the velocity of the circulation was maintained and no evidence of diminution in the speed of blood flow could be obtained by any indirect evidence obtained (see p. 5 "Hemodynamics", part 6). Finally, there was no discrepancy between the figures obtained in the studies of cardiac output, on the one hand, and those relating to the basal metabolic rate and the respiratory volume on the other, as is the case in congestive heart failure. On the contrary all these figures appeared to be evenly decreased. That is why we may recognize a certain adjustment of the decreased cardio-vascular activity to the decrease in metabolic processes in the very aged. Indeed, by the unavoidable process of senile metomorphosis the circulation of "macrobiotes" is kept at a low functional level with a diminution in reserve and a restrictive power of adaptation. Yet, from what has been presented, it is clear that the circulatory apparatus is distinguished by an evident degree of sufficiency correlated with the modest bodily requirements of these aged individuals. Thus they have been able to continue their usual modes of life and even to carry on a certain amount of muscular work.

Peculiarities of Respiratory Apparatus

The respiratory apparatus of these aged individuals also exhibited a number of peculiarities. Among the metamorphoses may be mentioned senile involution of the lungs (atrophic emphysema), a decrease in thoracal and pulmonary movements, a decrease in vital capacity, a diminution in respiratory rate and, finally, an increase in pulmonary dead space. Indeed, although these changes interfered with the efficiency of external respiration our investigations forced us to recognize that under conditions of rest or moderate exercise the primary purpose of respiratory activity was achieved and arterial anoxemia was never observed. In a

few of these "macrobiotes" only was a minimum degree of oxygen desaturation noted. Even in such people we found no evidence of real oxygen lack in the peripheral tissues. Furthermore our studies revealed a rather considerable rise in oxygen utilization by the tissues. We may therefore conclude that this rise in oxygen uptake served to compensate for an oxygen supply that was not always completely adequate. Thus, although because of a reduction in their capillary net-work the peripheral tissues actually received less blood than normal in a unit of time, nevertheless the tissues had become able to obtain more oxygen from the blood than do those of young or middle-aged people. For it is a well known fact that this accessory mechanism of increased oxygen uptake by the tissues is called into play in the case of people in the twenties or even in the forties, only in case of strenuous exercise. It is clear that such activity would be quite impossible at the age of 100 years because of the very evident inferiority of the circulatory and respiratory systems as well as the reduction in neuromuscular power. We must, however, recognize these systems as functionally quite sufficient in the case of rest or moderate exercise.

In commenting on the studies of the morphology of the blood in this group of aged persons certain findings are worthy of note which beyond a doubt indicate a general weakening of hemopoesis. We frequently observed hypoplastic hyperchromic anaemia, leucopenia with a diminution of the number of neutrophiles and lymphocytes as well as thrombocytopenia and retarded regeneration and maturation of all blood cells. As a rule none of these changes were marked and never indicated a really serious failure of blood formation. Therefore the oxygen carrying capacity of the blood was never appreciably reduced—a fact of fundamental importance. In general, then, we may say that no disorders of blood formation occur which are of sufficient significance to restrict the functional capacity of the principal organs and systems of the aged body.

As to renal function we can say very little about abnormalities in this field. The ordinary data obtained on tests of the genitourinary system were normal or but slightly altered. Urination was in most cases normal. The power of the kidneys to concentrate the urine was but slightly diminished. The variations in specific gravity throughout twenty-four hours were of considerable amplitude. The excretion of chlorides after the injection of ten grams of sodium chloride remained quite unchanged. Finally, the variations in the non-protein nitrogen of the blood were within normal limits as were the figures of Ambard's Constant. There were, however, some other findings that suggested a certain weakening of the kidney's functional ability, especially the records of Castaigne's probe dencimetrique. In other words the kidneys of these very aged people appeared to be unable to react to increased bodily demands as are those of young or middle-aged people. At all events renal function in these "macrobiotes" did not suffer more than the other principal vital processes of the body.

Water Balance and Extra-Cellular Fluid

In the matter of water balance and extra-cellular fluid many important peculiarities were found. These included a considerable and varied dehydration of different tissues, decrease in the osmotic pressure of the plasma proteins, normal figures for the lipocytic quotient, normal figures for the dry constituents of the blood with almost no arteriovenous difference, weakening of the sensation of thirst with a considerable decrease in the renal and extra-renal output of water, and finally quite atypical changes in the blood after water ingestion like the paradoxical changes in diabetes insipidus. After experimental water ingestion the end results in these old people were quite satisfactory in so far as there was complete removal of all ingested water and no retention in the tissues took place. However, in the intermediate stages, it was evident that there was a certain lack of perfect coordination between the various control mechanisms. This idea was supported by the results of serial blood examinations after water ingestion with a late acceleration of water output and the appearance of some symptoms suggestive of early water intoxication. It may be argued on theoretical grounds that the deficiencies in the maintenance of water balance is due to insufficient central control, a functional weakening of the hypophysis-hypothalamic system, on the one hand and to peripheral changes, an aging of the blood colloids, on the other. An inevitable senescence of the biocolloids (senile hysteresis) involved a decrease in their hydrophillia and hydration as well as a decrease in their ability gradually to free themselves of a water surplus. It seems possible that the very atypical results of the McClure and Aldrich test, which lasted for hours, may be explained on this basis. These results appear to depend on the well marked decrease in the hydrophyllia of the tissue colloids.

In the same way we have many reasons for believing that in the very old there is a certain deficiency of the neuro-humoral control of carbohydrate metabolism. As a matter of fact blood sugar levels were always found within normal limits and glycosuria could not be produced. However, after the ingestion of dextrose there took place a very peculiar plateau-like hyperglycemic curve with a gradual slight rise in blood sugar, a retarded return to normal and a scarcely detectable secondary hypoglycemic phase.

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So, also, the hyperglycemic curve after the hypodemic injection of epinephrin was of an unusually sluggish character. These findings are naturally not to be considered as evidence of latent senile diabetes but rather they suggest that the control of carbohydrate balance in "macrobiotes" is less exact than it is in the young or middle-aged. The observations reported and the records obtained after the experimental ingestion of water are typical examples of the fact that the senile body is unable to react to various changes in the metabolic situation with the appropriate adaptive mechanisms in a prompt, precise and even manner. In other words in advanced senility there occur certain reductions in the ability of the body to dominate the situation when confronted with a more or less increased load.

Furthermore studies forced us to the conclusion that the peculiarities of carbohydrate metabolism in "macrobiotes" depends not only on a weakening of central control but also upon many peripheral defects. These, in all probability, include slowed absorption of sugar by the intestines, decreased permeability of the hepato-parenchymatous barrier and finally disturbances of glycogen synthesis especially glycogen fixation in the liver and other storage organs. As far as is now known, these changes in the metabolism of the hydrocarbons closely resemble those seen in vitamin B II deficiency. It would be very tempting to assume that a kind of "a-riboflavinosis" occurs in very advanced senility but our investigations yielded no evidence that would tend to confirm this attractive hypothesis.

As regards fat-lipoid metabolism we supposed a-priori that we would find evidence of appreciable changes in advanced old age. The fact that the "macrobiotes" whom we studied were exceptionally thin with a nearly complete loss of subcutaneous fat made us suspect that the deposition of fat in almost unlimited quantities as is seen in the young and the middle-aged might no longer be possible. Our studies showed an increase in all the principal groups of blood lipids in the plasma. The rise in blood cholesterol in the aged has long been known. But in the individuals whom we observed the hypercholesteremia, which was moderate in degree, was no more pronounced than was the total hyperlipidemia or the hyperlipemia. Apparently an increase was less often noted in case of the blood phosphatids than it was in other lipid groups. However the cholesterin-lecithin ratio in these individuals showed as a general thing no "senile" rise. The content of sero-lipase was on the contrary diminished. We suppose that the changes mentioned have been, in part, caused by an involutionary disaggregation of cellular protoplasm, presumably a continuous process in the aged body, which has been due to decreased ability on the part of various organ-depots to store lipids. Another factor, a senile weakening of the central control of lipid metabolism, may also be assumed. Thus we may infer that this phase of metabolism in very aged people is characterized by an increased passage of various fats and lipoids into the blood plasma as well as by the tendency for them to remain in the body fluids without prompt or complete utilization or storage.

It is very interesting to note that although there was a definite increase in blood cholesterol and in other lipids we were unable, except in a few cases, to establish in the "macrobiotes" whom we observed any obvious clinical signs of arterio-sclerosis. These findings, I must confess, throw some doubt on the popular conception that disturbances in the metabolism of the lipids and especially of cholesterol play an essential part in the genesis of arteriosclerosis. This conception has been widely adopted partly, I surmise, because it seems to be so reasonable and partly because it affords a single explanation for facts that are difficult to explain otherwise. At all events our "macrobiotes" did not suffer from arterio-sclerosis or atherosclerosis in spite of marked hypercholesterolemia and hyperlipidemia. This fact is of great importance in the interpretation of the phenomena of normal senility.

From this point of view it is worth noting that in these very old individuals mineral metabolism did not exhibit any detectable disorders such as are commonly to be found in patients with advanced arteriosclerosis. The absence of "senile" hypocalcemia and hyperpotassemia, the unchanged content of blood inorganic phosphorus, the fact that the renal excretion of the salts of calcium and phosphorus was not only not increased but was actually decreased—all these findings furnished evidence that the typical processes of senile transmineralization had not occurred in these "macrobiotes." In this connection we may recall the fact that we were unable to establish in them any evidence of decalcification of bone on the one hand and any detectable ossification of the cartilages, vessels or other tissues, on the other. Finally our investigations showed that the potassium and calcium and magnesium-calcium ratios varied within normal limits. As regards the acid-base balance this appeared to be slightly displaced toward the alkaline side.

Thus we may conclude that metabolic processes in these "macrobiotes" were characterized by striking peculiarities dependent upon a varied degree of involution of tissues, organs and systems. As a rule, however, no definite disorders to the general body economy resulted which could be considered as really pathological. As I have repeatedly stated, a prompt, precise and delicate integration of vari-

ous metabolic processes in meeting a new situation was lacking especially if it involved a marked increase in the body's load. Under ordinary circumstances, however, the desirable result of metabolic equilibrium could always be attained. The principal blood constituents, as has been pointed out, varied within normal limits or showed at most very slight variations from the normal, the respiratory quotient remained unaltered and, an especially important consideration, the basal metabolic rate was markedly decreased. The last fact must be considered as a fundamental manifestation of the functional involution of the aged body. Furthermore we can make the general statement that senile changes in the process of metabolism are more of a quantitative than a qualitative character.

In reviewing the records of our biochemical investigation it appears to us quite possible that a weakening of the functional ability of the liver may be assumed to have occurred in these very elderly people. To support this assumption we may point to the following changes:—

1. A rise in the blood glycogen (with a probable diminution of this substance in the liver) apparently due to interference with glycogen storage.
2. A slight decrease in the processes of deamination and urea formation.
3. A certain degree of decrease in the ability of the body to store water.
4. A diminished albumen-globulin ratio in the blood (and probably in the tissues as well).

As a matter of fact, however, all these changes were relatively slight and could hardly be considered evidence of real hepatic deficiency. In addition there were obtained other biochemical data that were quite compatible with normal liver function; for example, normal cholesterol esterification, the absence of ketosis, hyperaminoacidemia and hyperlactacidemia, etc. Finally the examination of the biliary function of the liver did not demonstrate any abnormalities. There was not the slightest evidence of so-called latent icterus. We have therefore concluded that in advanced senility the functional ability of the liver does not undergo any such alterations as would cause a lethal decrease in the principal metabolic processes of the body.

As everybody knows there is a great temptation to speculate on the possible connection between senile metamorphoses and the function of the endocrine glands. Many attempts have been made to identify this or that monoglandular or pluriglandular deficiency as an essential factor in the development of senility but up to the present, except for data suggesting a gradual morphological involution of these organs with advanced age, there has been no convincing evidence in favor of this idea. In making our studies of this group of "macrobiotes" one is inclined to assume a-priori that the functional state of the various organs of internal secretion had deteriorated from the destructive action of time as much as had that of other organs and systems. We could not, however, obtain sufficient evidence to support this assumption. In this connection it must be remembered that even the most modern methods of investigation ordinarily fail to detect the presence of the various endocrine disorders in their initial stages. Our observations, both clinical and laboratory, failed to reveal in these individuals any detectable manifestations of dysfunction of the parathyroid glands, pancreas (islets of Langerhans), testes (interstitial cells of Leydig) and apparently also of the adrenals (cortex and medulla). (A simple involutional atrophy of the pineal and thymus must be admitted.)

On the other hand we have every reason to believe that the functional ability of the hypophysis, thyroid and ovary had undergone a definite functional weakening which exerted a great influence on the course of many vital processes in the aged body. Not that there took place any such definite pituitary or thyroid deficiency as to produce a typical clinical picture. However all the females without exception showed definite hypogonadism, while the aged males showed much less evidence of this condition. This difference between the sexes was pronounced, but one cannot say whether or not it could account for the fact that it was chiefly the men who were able to reach or exceed the age of 100 years. It is a curious fact, noted by ancient and modern investigators alike, that in the seventies and eighties the females greatly outnumber the males but that the age of 100 is attained principally by males.

There is general agreement that the various manifestations of the so-called sclerosis cerebri may be regarded as very frequent if not constant concomitants of advanced age. Rather a large number of studies have been made partly in the hope that some findings might prove to be the key to an explanation of the genesis of senility itself. Therefore it is a very remarkable fact that in observing these "macrobiotes" we did not encounter anything indicating the presence of cortical, subcortical, cerebellar or spinal lesions. Such manifestations as impairment of skilled movements, for example spastic hemiplegia, sensory deficiencies, ataxia, tremor and pathological reflexes, were not found. Neurological examination revealed only a retardation of all voluntary movements, varied weakening of sensory perception and a generalized reduction of reflex irritability and reactivity. A certain degree of inferiority of central nervous

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control over the various vegetative processes seemed also to be evident.

Nevertheless we found nothing to indicate any considerable degree of central nervous system disorder, certainly nothing to suggest a complete bankruptcy on the part of the principal vegetative centers, especially those of vital importance which are located in the floor of the 3rd and 4th ventricles. The same may be said of the centers in the spinal cord, peripheral ganglia and intramural system which are subordinate to the higher centers but still maintain a certain degree of autonomy.

Furthermore I wish to call particular attention to the surprising mental freshness of these "macrobiotes". In the great majority there was only insignificant modification of the course of their mental processes, very definitely less in degree than the various changes which occurred in the somatic sphere. We consider this situation to be very typical of normal senility.

Except in the case of two individuals, no symptoms of genuine progressive senile psychosis were observed. In some instances, however, the initial manifestations of the so-called asthenic syndrome were evident. These were (1) a certain slowing of some intellectual functions, (2) some weakening of the memory as to time perception and (3) a decrease in the ability to concentrate with a resulting decrease in the quality of performance of tasks involving mental or physical activity and also a greater tendency to fatigue when mental effort was prolonged.

At the same time our study enabled us to establish the following for the whole group:

(1) Absence of any difficulty with sleep.

(2) Almost complete absence of disturbances in the emotional sphere.

(3) Syntonic-cycloid character with good effective contact.

(4) Absence of character changes with a healthy and well preserved moral-ethical core to the personality.

On the basis of these observations we must conclude that in advanced senility there can be preserved unaltered that most important factor in human life, a constant personality structure with all the inherent qualities of the definite individuality.

This fact is of great importance not only of itself but also when considered in relation to the interpretation of the various somatic processes which had been observed in these "macrobiotes." Possibly one should consider their mental freshness as at least in part the result of the satisfactory course of the principal vital processes going on in their aged bodies, or as we might put it, the good state of their health. Naturally the metaphysical "problem of soul and body" does not belong to a discussion of clinical physiology and medicine. Yet one is tempted to wonder if, at the age of 100 years when the summit of life has been reached, it may have been in part the influence of mental guidance on bodily activity that has created such an integration of the entire person as to cause it to endure. For if the cerebral cortex, the vehicle or the executive organ of mentality, has not undergone any appreciable alterations in an aged individual it is reasonable to infer that the transmission of mental impulses along somatic paths is also undamaged.

At the same time we have been tempted to conclude that the various regulatory mechanisms which phylogenetically considered are of earlier or later origin—such as: the adjustments of tissue or cell self regulation, neuro-humoral interplay of metabolites and ions, enzymes, vitamines and hormones, and finally the many-storied nervous system, in their highly complicated and poorly comprehended interactions,—were able to achieve as satisfactory a correlation of function in advanced senility as in the normal conditions of earlier life. In other words *consensus partium* was not altered in the elderly subjects of this investigation, a fact which I consider a fundamental feature of physiological, normal senility.

Conclusions

The course of our investigations has forced us to realize that the ancient postulate—"senectus ipse morbus" (Cicero), which has in the past been popular, is incorrect. On the contrary we assert that senility, like other periods of human existence, may be unburdened by any pathological changes. In our opinion a person may reach the age of 90 or 100 years and still be practically sound. Thus the "macrobiotes" whom we have studied must in the great majority of instances be considered healthy people. Although they had indeed become old, and exhibited a large number of familiar senile characteristics they did not suffer from any *diseases* of old age.

We may therefore regard them as typical examples of physiological senility. Our investigations have shown that this terminal stage of normal postnatal onto-genesis is characterized by many specific pecularities. These have been described in detail. Our attempt has been to present as nearly as possible the complete picture of the syndrome of normal senility.

A summary of the various changes that take place may be made about as follows. There is, as has been mentioned, considerable change in the biocolloids due, we believe, to aging (senile hysteresis). Evidences of a far-reaching atrophic in-

continued on page 326

THE COST OF MEDICAL CARE*

JOSEPH C. O'CONNELL, M.D.

The Author. *Joseph C. O'Connell, M.D., President, Rhode Island Medical Society, 1948-49; Chairman, Board of Examiners in Medicine, R. I. State Department of Health; Secretary, Board of Hospital Commissioners, City of Providence; Former Surgeon-in-Chief, Rhode Island Hospital.*

FROM OCTOBER, 1947, through September, 1948, Rhode Island Hospital, the largest voluntary general hospital in the State, admitted 6,070 ward patients, for whom a total of 91,021 patient days' service was rendered.

How many people in Rhode Island know that those 6,070 persons received free medical and surgical care by some 250 medical doctors of this State—free as far as any payment from any source whatever to the physician for the service he rendered, whether his task was one of the most involved surgical procedures, or an operation less serious?

How many people in Rhode Island know that the surgeons of the community on that hospital's visiting staff performed 4,258 operations on ward patients for which no payment whatever was made to the surgeons? If an average of $100 per operation was taken, this service would represent a cash donation by the surgeons alone of more than $425,000, in addition to the time they gave for pre- and post-operative care. In addition, add the comparable sizable contribution by the physicians who rendered free medical service to the more than 1,800 patients hospitalized for non-surgical care, some of which was undoubtedly far more costly than surgery.

How many people in Rhode Island know that the physicians of the community serviced during the same period 9,428 persons in that hospital's outpatient department, for a total of 39,119 visits which, if charged at the prevailing office fee would represent another donation of more than $157,000?

How many people in this State realize that this *free* service by the physicians at Rhode Island Hospital is duplicated in every other hospital in the various communities of Rhode Island, representing a cash contribution greater than the total given by the public in the annual Community Fund campaign.

*Presidential Address delivered before the Rhode Island Medical Society at its 138 Annual Meeting, at Providence, R. I., May 12, 1949.

No, you won't read these statements of our work in our medical journals. Nor does the daily press take time to point out the fact that our contribution to the welfare of the people of this State is far beyond anything done by any other group of citizens. Nor do those who would socialize the profession of medicine give us credit for this service, or point out to the tax payer that under a federalized program general tax funds in this and every other State would have to be drawn upon to compensate the physicians for work they have annually done gratuitously.

Yet we must listen as the complaint is made against us about the high cost of medical care.

What is *medical care?*

The word medicine is defined by Webster to mean "the science and art dealing with the prevention and cure of alleviation of disease." It therefore involves the private practice of physicians and dentists; who in turn utilize medical facilities, such as hospitals and other agencies to assist them in rendering health care.

Is not the complaint actually about the high cost of health care? And is the complaint reasonable?

Health is as much of a necessity of life as food, clothing, or shelter. But the education of the people has failed through the years to focus attention on this point. Our economy allows for budgeting for the score of miscellaneous services that make life easier and perhaps pleasanter. But in spite of the fact that we cannot be truly happy without good health, we have continued for decades to travel our way, gambling that the need will not arise for us to face an illness that may disrupt our individual economic status.

And so it is that we who are physicians now find that all the economic woes in the wake of faulty planning for health care by the public are neatly packaged under the heading of high costs of medical care and are placed on our doorstep. The federal government prepares a health insurance bill, and then builds its arguments for it with an attack on medicine, and the medical profession, not on the pyramiding costs of health care.

What about the costs of physicians services?

To find out I have recently made a survey of a representative cross section of the membership of the Rhode Island Medical Society regarding fees charged for services. No one answering my

continued on next page

inquiry was required to admit his identity, and the fact that my findings were to be used in this presentation were not revealed. I sought information on the change in fees for both house and office visits from the year 1939 until the present. I also sought information on the changes, if any, in the charges for the more common surgical procedures.

The result may be summarized briefly. In the past decade the charges generally for home and office visits have been increased but one dollar each, from $2 for an office visit to $3, and from $3 for a home call to $4. Men engaged in specialty practice have varied their fees but little in the ten year period, with the fees throughout ranging from $5 to $10 for either home or office call. The bulk of the specialist's work is, of course, confined to office practice.

The change in the charge for surgical services has apparently varied little through the years. Some specialists in urban areas have been faced with rising costs for trained auxiliary personnel to staff their offices, and with increased rental charges, and consequently have made increases up to 15 per cent in their fees. Most of those who reported to my inquiry, however, have not raised their fees. An increase was noted for obstetrics, but such increase was merely comparable to charges paid under governmental programs and merely matched what was the prevailing rate generally.

The trend towards specialization has been both praised and criticized. Physicians today have a different public to handle from that which they had a generation ago. Writers of popular articles on medical subjects have capitalized on every opportunity to exploit every individual scientific experiment before it is tested and proved effective for general use. Some of these articles may be good, but an equal number are bad. Today's doctor finds that his patients are often critical and perhaps suspicious, if he is not as familiar with such writings as he is with the medical texts.

The very conditions that have complicated the physician's problems of today are largely the product of his own unselfish work in the fields of medical research and in the application of new and successful techniques. There are no secrets regarding medical work, no patents to bring financial reward to the discoverer of a new remedy.

Today the physician more than ever before has entered into the field of preventive medicine, and as a consequence we have an increasing breakdown into specialty groups. The pediatrician, guiding the infant on a keep well formula, the cardiologist studying the prevention rather than just the treatment of heart disease, the industrial physician seeking safeguards against disability, the psychiatrist and neurologist heading off mental disability before it becomes catastrophic—all are examples of the expansion of the medical phase of health care.

Today the public encourages this trend towards specialization, and I believe for the most part people recognize that scientific medicine, in both its curative and preventive aspects, encompasses such a wide field that no one man can accept the complete responsibility for knowledge of all facets of medicine. But the education of the public to the necessary costs of this specialized service has lagged far behind, and as a result it arises as a spectre now to haunt the physician who has devoted years of his life to specialized study and research.

It is interesting to note in this connection that in the past decade the total number of Rhode Island physicians certified by the specialty boards and approved by the American College of Surgeons has risen from 126 in 1938, to 220 in 1948. The number of internists, obstetricians and gynecologists, ophthalmologists, pediatricians and urologists has doubled; the number of orthopaedic surgeons has tripled; and the increase in anesthetists, dermatologists, pathologists, psychiatrists and neurologists, has been four-fold.

What about hospitalization costs?

First it should be noted that more people utilize our hospitals today than ever before. This development may be traced to several factors. In the past two decades there has been better public education regarding hospitalization. People more readily enter a hospital whereas years ago they would prefer to be confined to their own homes. The development of prepaid insurance plans has made people conscious of the advantages of hospital care, and the ownership of such insurance has encouraged them not only to seek this care, but even to demand it at every opportunity. This is evidenced by Rhode Island Hospital admissions over the years. In 1930 a total of 7,888 were admitted; in 1940, 8,721; last year, 14,398. The same situation undoubtedly prevails in the other hospitals of the State.

Since 1939 the ward rate for medical and surgical services has gone from such lows of $2 and $3 to a minimum average of $7.40, with the lowest minimum rate reported to me in a survey I made within the past month, of $6.50, and highest $9 plus extras. The semi-private rate has gone in the same period of time from an all-inclusive rate of $4.50 to a present minimum average of $9.10, and the private all-inclusive rate of $6.00 of a decade past is now a statewide average minimum of $10.90.

In other words, for the minimum average ward rate charged today, the patient could have secured minimum private accommodations in all our hospitals ten years ago.

Charges for accommodations for obstetrical care have paralleled those for medical and surgical accommodations, with the minimum average ward

rate today, on the basis of my study, $7.93, as against charges by individual hospitals in 1939 for ward accommodations of $2.50 and $3.00 per day.

All the ramifications of these costs may be satisfactorily explained by the various hospital administrations. It is not my purpose to analyze them in detail. I merely cite them as statistical evidence of the rising cost for this phase of health service that must be borne by the public generally. In passing I call attention to the fact that our higher standard of living, with higher wages and shorter working hours, has resulted in a greatly increased salaried personnel to operate our hospitals. The increase in salaried personnel, as noted in reports to me, ranged from 10 per cent to as high as 64 per cent over the working staffs of 1939. Wages, of course, have increased sizeably, and the 1948 report issued by Rhode Island Hospital states that the payroll alone exceeded $2,100,000, a sum that represents two and one half times the *total* cost of operating the entire hospital in 1939.

All this increase, as in all our present day economic issues, is of direct concern to the individual citizen, the consumer-patient. The cost of maintaining one patient per day in hospitals in this State ten years ago ranged from a low of $4.82 to a high of $8.78. This year it ranges from a low of $9.26 to a high of $17.43.

How much of this increase in hospital cost is necessitated by services over and above board and room is a matter requiring far more detailed study than can be attempted in this brief presentation. But the greater use of auxiliary services of the hospital, such as laboratory procedures, x-ray, occupational and physical therapy, all vitally important in modern medical care, represent additional charges that the patient must assume today if he is to expedite his return to good health.

Again using Rhode Island Hospital as an example, I have noted that in 1939 the x-ray department reported 43,111 films exposed. Last year the report listed 74,110. The laboratory listed 102,527 examinations in its annual report a decade ago; 157,902 last year. In 1939, 232 patients were referred to the hospital's occupational therapy department; last year's statistics listed 9,034. In 1939, 35,014 physio-therapy treatments; in 1948, 47,117.

It is logical to ask if the question of rising costs for hospitalization is peculiar to highly-industrialized and urban Rhode Island. A preliminary survey would indicate that the trend nationally is to higher rates to meet increased costs, with New England and the Pacific coast region having the highest rates. The hospital rate survey reported by the American Hospital Association last year indicated this in showing that the most frequently charged single room rates increased from 1947 to 1948 in six of the regional areas, and remained the same in three regions. In both years New England and the Pacific region led with $10 rates.

However, a recent survey of the question of hospital rates in a large eastern city, which I have compared with the reports I have compiled for Rhode Island, indicate to me that the minimum rates here are higher. In spite of rising costs, therefore, I am of the opinion that there is need for stricter supervision of administrative practices in all our hospitals. Otherwise they make themselves more vulnerable to governmental participation because they do not seek financial stability by the adoption of economics that may be within their immediate reach.

The cost of medications presents another interesting problem and one in which the physician again becomes the target for attack. Two world wars in which tremendous stimulus was given to scientific research have brought forth many new drugs and remedies. Some have proved immediately successful; some must wait upon time for the proving of their true value. But as each new medication is heralded immediately in the public press, and in popular magazines, even before it is proved to be the cure which such writers proclaim it to be, the physician is faced with a public intolerant of delays, and demanding in its right to have the latest "wonder" medication.

Like all saleable commodities newly-created, drugs are costly until such time as they can be mass produced. Very often it is not possible to produce certain drugs in limitless quantity by reason of the very nature of their formula. Yet the ill person wants the medication, and as physicians we most willingly recommend it if it is the proper solution to alleviate the disability. A human life is at stake, and mankind cannot wait upon the expense for the possible cure when such expense is measured in dollars and cents. This highlights clearly the issue in general—that the health cost factor must be recognized as part of the entire economic pattern in planning for the necessities of life.

There are those who continually maintain that the cost for the maintenance of health is too much for persons wth average or moderate incomes to be able to pay, either what it is worth or what they personally think it should cost. But that theory has never been demonstrated, and it cannot be proved until people generally are educated to approach the question of health care as a necessity of life, as are shelter, food, and clothing.

Recently we physicians, for we individually form the A M A, have been accused of raising funds for a lobby to defeat compulsory federal health legislation. Yes, we will fight against government control of medical care in this country. We know that it is not the immediate humanitarian motive that is at stake, but a far greater objective is sighted by

continued on next page

those who won't admit that the control of the health funds of the individual provides a life and death grip over his free and individual rights in general.

But our national AMA fund is subscribed to by us for a greater reason. We support the theory that the people of this country must be encouraged in their responsibility to provide voluntarily for themselves. They must learn to budget against unpredictable costs arising from sickness just as they have demonstrated they can protect themselves in some measure against the costs arising from death through the purchase of life insurance. In this connection I have noted that Mr. Bruce E. Shepherd, manager of the Life Insurance Association of America, in his address to that Association at its annual meeting in New York City last December, stated

> "... the aggregate protection enjoyed by United States policyholders—who are estimated to number around 78,000,000 at the end of the year—will have passed the second hundred billion level during 1948 ... This will mean a growth in the total insurance in force on United States residents of about 8 per cent during 1948 and about 86 per cent since the end of 1938"

Again, Mr. Shepherd, on the same occasion, pointed out

> "As a result of the year's operations the assets held by United States legal reserve life insurance companies will have increased about 7 per cent to a total of about fifty-five billion four hundred million at the end of 1948. These life insurance funds have approximately doubled in the space of a decade and substantially more than tripled in 20 years. This growth reflects the increasing use of life insurance as a channel of savings and investment for the creation of individual security".

What has been done voluntarily in life insurance can be done equally well voluntarily in the provision of sickness insurance. Death is inevitable, and therefore protection against the economic loss resultant from it may be more readily sold. But sickness, too, is castastrophic on occasion, and certainly disabling to a greater or less degree in every instance. Everyone is familiar with the problems of sickness. Certainly a sound educational program on the necessity of protection against economic loss resulting from illness is justified. Medical profession leadership in developing prepaid medical insurance plans for the public's welfare warrants commendation, not condemnation.

CENTENARIANS. THE SYNDROME OF NORMAL SENILITY

concluded from page 322

volution can be found everywhere. The various tissues, organs and systems undergo an evident senile metamorphosis, both morphological and functional, which results in some degree of inferiority and diminution in their functional capacity and reserve. Metabolic process generally showed alterations but only of a quantitative nature. The ability to receive stimulation and to react to it, that is, conditioned and unconditioned reflex activity in the broader sense, is decreased. The various autoregulatory process of the senile body are unable to take place with the promptness, smoothness and precision characteristic of earlier life. Yet, in general, these various changes in balance can be brought into equilibrium and the senile body is able to function harmoniously as a whole although at a somewhat lowered level. In the mental sphere these normally senile individuals never exhibit any appreciable difficulties. Finally, there is a very remarkable adjustment of the various vitally important organs and systems to the moderate requirements of the aged body. It is possible to maintain *consensus partium* even at the age of 100 years. Physiological senile withering proceeds gradually and harmoniously, with synchronized retrogressive change in the various organs and systems.

Thus we may say that normal senility is characterized by an absence of those disharmonies and deviations from the normal which we call disease. In contrast to this we see in the various syndromes which characterize pathological senility, evidence of many and varied disharmonies. In spite of senile withering, in the "macrobiotes" whom we have observed, the whole organism has endured as a definite physiological unit. Moreover these people have continued their lives as definite personalities with all their characteristic individual features. It is also well worthy of note that they have as a rule been able to adapt themselves to the decrease in capabilities and physical strength without protest or vain attempts to resist the inevitable. Life with them has proceeded more and more in the tempo of adagio, dominated at all times by a mental and vegetative calm. Thus it becomes quite easy to comprehend why these very aged people have in the great majority of cases continued their activity with a certain ability to work and with enjoyment and, in short, have been able to lead ordinary lives.

In the short limits of this article it has been impossible to discuss the causes of longevity but rather to discuss observations made on a group of "macrobiotes." As a result of these studies we may come to the conclusion that 100 to 120 years should be the normal span of human life. Unfortunately up to the present this age has been reached in rare instances only. Premature senility and death has been the rule. Therefore efforts to achieve longevity need not be directed toward an attempt to prolong the span of human life but rather toward measures calculated to prevent premature pathological aging and premature death.

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BLUE CROSS PARTICIPATION

The decision of Blue Cross within the past month to participate in the Rhode Island Medical Society's prepaid surgical insurance program was long overdue. From the beginning of the Society's studies on such a program the thinking has always been that Blue Cross would be the merchandising agent as it is in practically every other State. We turned to the insurance industry two years ago when Blue Cross could not decide to be our agent, and certainly the step has not been an unfavorable one for the people of Rhode Island. With the combined forces of all groups interested in the extension of prepaid insurance the citizens of Rhode Island will be the gainers, for the competition will guarantee maximum benefits at competitive figures within the price range of everyone.

The daily press made much of the fact that the Society had recently incorporated a non-profit medical service corporation known as the Rhode Island Medical Society Physicians Service. Unfortunately the reasons for this corporation were not generally known to be the result of the action of our House of Delegates, and as a result the press erroneously concluded that both the Society and Blue Cross were unaware of each other's steps to solve their problem.

In April a conference between officers of the Blue Cross and the medical Society resulted in the decision by Blue Cross to consider a two corporation arrangement such as operates successfully throughout the country. Under such a plan the medical Society forms a non-profit medical service corporation, and the Blue Cross serves as the selling agency of the policy of that corporation. Each group operates independently as regards supervision of its own funds, but there is close liason between the organizations to achieve efficient and economical administrations.

Blue Cross had agreed to consider this proposal, and it asked that the Society inform it whether it would wish Blue Cross to be the exclusive agent for its policy, and what decision would be taken regarding any claims submitted by osteopathic physicians for services they might render subscribers.

The entire proposal was submitted to the House of Delegates at its April meeting, and the House authorized the formation of the non-profit medical service corporation so that the affiliation with Blue Cross might be achieved. The House also expressed the opinion that Blue Cross should be the exclusive agency to sell the policy of such a corporation,

continued on next page

and that claims rendered by osteopathic physicians would be recognized as would the claims of any non-members of the Society.

The Blue Cross was informed of the decision of the Society after the meeting of the House of Delegates. It then released its announcement that it would participate in the Rhode Island Surgical Plan of the Rhode Island Medical Society as formed and adopted by the Society more than a year ago.

Out of trials and difficulties we forge ahead much better prepared to do a better job. The Rhode Island Plan now sets a pattern without parallel in the country, for we have mobilized all the major groups concerned with the extension of prepaid medical and surgical insurance. The members of the Society have guaranteed the service for persons within stated income limits that compare favorably with any in the country. The insurance companies, and now Blue Cross, will sell the policies. All that remains is for a public response to the importance of individual protection against the costs of unexpected illness or disability.

NORMAL OLD AGE

Geriatrics, the study of the elderly, is a division of medical investigation and practice that is even less clearly separable from the field of general medicine than is pediatrics its counterpart at the opposite end of the span of human life. The profound changes which occur at puberty are certainly much more definite than are those that take place as the individual passes the menopause or the still more doubtful alterations that are attributed to the so-called male climacteric. Most of what has been written regarding disease as it occurs in elderly patients consists of a review of the known facts regarding the degenerative process generally with the addition of words of wisdom based on the experience of practitioners over many years which has indicated how the aged tend to react to infections and injury and how such conditions may best be managed. But, just at the dividing line between adult medicine and geriatrics is quite indefinite—so, still more indefinite is the distinction in the aged between those conditions that can really be considered to be disease and those that represent the degenerative processes inherent in normal senescence.

In this issue of this Journal there is published a concise summary of some very extensive work which bears directly on this important question. Professor Basylewicz and his colleagues in their studies of normal old age appear to have made a fundamental contribution in the field of geriatrics the value of which will be more and more appreciated as the years go on and the average span of human life continues to be lengthened. That they were able to find and study such a large group of nonagenarians and centenarians is indeed surprising and the detailed investigations which they have made probably will stand as a classic description of the normal aging process, a firm basis for further progress in this important field.

CHARLES J. ASHWORTH, M.D., LL.D.

It has been with genuine pleasure and pride that the Fellows of the Rhode Island Medical Society have noted the award by Providence College of an honorary Doctor of Laws to Dr. Charles J. Ashworth, president-elect of our Society.

As the first graduate of the College, Doctor Ashworth has indeed been, as his citation stated, "an illustrious alumnus who has shed lustre and renown upon your Alma Mater by the eminence you have attained in the field of Medical Science." His work as a physician is known to all of us who have worked with him on the staff of the Rhode Island hospital, the Chapin hospital, and the State Infirmary, and we recognize in him the many characteristics that we associate with the ideal.

He was cited as an alumnus who has taken an active part and has assumed leadership in Alumni affairs. We, too, know Doctor Ashworth as one who has given generously of his free time to contribute to the success of the affairs of the medical Society. He has served on many committees through the years, and he has been our assistant treasurer from 1941 to 1945, and as treasurer until this year when he was elevated to the office of president-elect.

Thus, as the first graduate of Providence College, Doctor Ashworth will also claim the honor of being the first alumnus of that College to be President of this historic and illustrious state medical Society.

In honoring him, Providence College stated he was her first born and the symbol of the greatness of her sons, the fulfillment of her hopes and the pledge of her future greatness. We who have chosen him as a future head of the medical profession in this State know that he will fulfill all those hopes, and that he will add further to the lustre of his College and the Profession to which he has devoted his life.

FISKE FUND ESSAY

The announcement at the annual meeting by the secretary to the Fiske Fund Committee that a prize is to be offered for an essay is most welcome news. Since the fund was established seventy awards have been made, with the last one granted in 1941. The Committee now offers a premium of $200 for the best treatise submitted before April 2, 1950, on the subject of "The Present Status of the Treatment of Peripheral Vascular Disease".

Caleb Fiske, one time president of the Society, died in 1834, and in his will he bequeathed two thousand dollars of his estate to the president and two vice presidents of the Rhode Island Medical Society in trust. Interest from this money has provided the premium through the years for the annual prize essay awards.

By careful management the trustees of the fund have increased it through the years. However, the decline of interest rates in the early nineteen forties resulted in less than a $100 annual income, and therefore the essay competition was suspended temporarily. During the past few years the Trustees have sought to change the manner of investment of the moneys in order to realize a higher income, and during the past year this change was effected, and with a suitable annual income now to be realized the proper activities of the Fund are again revived.

Announcement of the conditions governing competition are listed on page 342 of this issue of the *Journal*. It is to be hoped that many members of the Society will take a personal interest in the contest and that an outstanding essay may be presented of scientific value to all physicians.

BIGGEST AND BEST EVER

When the circus comes to town annually the pronouncements are that it is the "biggest and best show ever", and through the years each show is reputed to be superior to its predecessor.

Medical society meetings do not indulge in such pronouncements, but now that our 138th annual session is written into our history we may safely assert that is was truly one of the best ever held by the Society. Strength for such a claim lies in the unprecedented high registration of physicians during the two days at the medical library. With a total Society membership of less than 800, our annual meeting had sufficient appeal to bring to the Library 533 physicians, a percentage that few state societies in the country have ever equalled.

The committee on arrangements, headed by Drs. Isaac Gerber and president Joseph C. O'Connell, did a masterful job in planning a well balanced schedule of lectures by outstanding speakers. There was no let down at any time in the entire two days, and from what would seem to be a first day climax with the splendid dinner meeting the sessions went on at the same high level throughout Thursday, ending with the informative and timely address by Dr. O'Connell on the costs of medical care, and the excellent research study by Dr. Denhoff on cerebral palsy.

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HOUSE OF DELEGATES
of the
RHODE ISLAND MEDICAL SOCIETY

Report of Meeting, April 27, 1949

A MEETING of the House of Delegates of the Rhode Island Medical Society was held at the Medical Library on Wednesday, April 27, 1949. The meeting was called to order by the President, Dr. Joseph C. O'Connell, at 8:20 p.m. The following were in attendance:

Kent
Rocco Abbate, M.D.
Peter Erinakes, M.D.

Newport
Norbert Zielinski, M.D.

Pawtucket
Henry J. Hanley, M.D.
Robert Henry, M.D.
Earl Mara, M.D.
J. Lincoln Turner, M.D.

Woonsocket
Henri Gauthier, M.D.
Victor Monti, M.D.

Delegate to the American Medical Association
Charles L. Farrell, M.D.

Providence
Charles J. Ashworth, M.D.
Philip Batchelder, M.D.
J. Murray Beardsley, M.D.
Alex M. Burgess, Sr., M.D.
E. Victor Conrad, M.D.
Morgan Cutts, M.D.
William P. Davis, M.D.
Donald DeNyse, M.D.
John A. Dillon, M.D.
David Freedman, M.D.
Peter F. Harrington, M.D.
William A. Horan, M.D.
Herman P. Grossman, M.D.
Albert H. Jackvony, M.D.
Louis I. Kramer, M.D.
Edward A. McLaughlin, M.D.
John C. Myrick, M.D.
Joseph C. O'Connell, M.D.
Michael J. O'Connor, M.D.
Edwin B. O'Reilly, M.D.
Alfred L. Potter, M.D.
Edgar S. Potter, M.D.
Daniel V. Troppoli, M.D.
G. W. Waterman, M.D.

Also in attendance was Mr. John E. Farrell, Executive Secretary.

REPORT OF THE SECRETARY

The Secretary's report of meetings of the Council of the Society held since the last meeting of the House of Delegates was submitted in mimeographed form to all the members.

It was moved that the report be accepted as presented and placed on file.

Recommendations from the Council

The following recommendations from the Council of the Society were read by Dr. Morgan Cutts, Secretary:

1. That the members of the House had voted by mail to authorize the Committee on Industrial Health to introduce proposed amendments to the Workmen's Compensation Law.

2. That the Council recommend that the 139th annual meeting of the Society be held May 10 and 11, 1950, at Providence. It was moved that this recommendation be adopted. The motion was seconded and carried.

3. Nominations for officers. In accordance with the By-Laws the Council submitted a list for officers and standing committees for the twelve-month period from the annual meeting in 1949 to the annual meeting in 1950. The Secretary stated that other nominations might be made at this time by any delegate. There were no nominations. It was moved that the slate of nominees submitted by the Council be accepted and that these nominees be declared elected.

The motion was seconded and unanimously adopted. The complete slate of officers is made a part of the official minutes of this meeting.

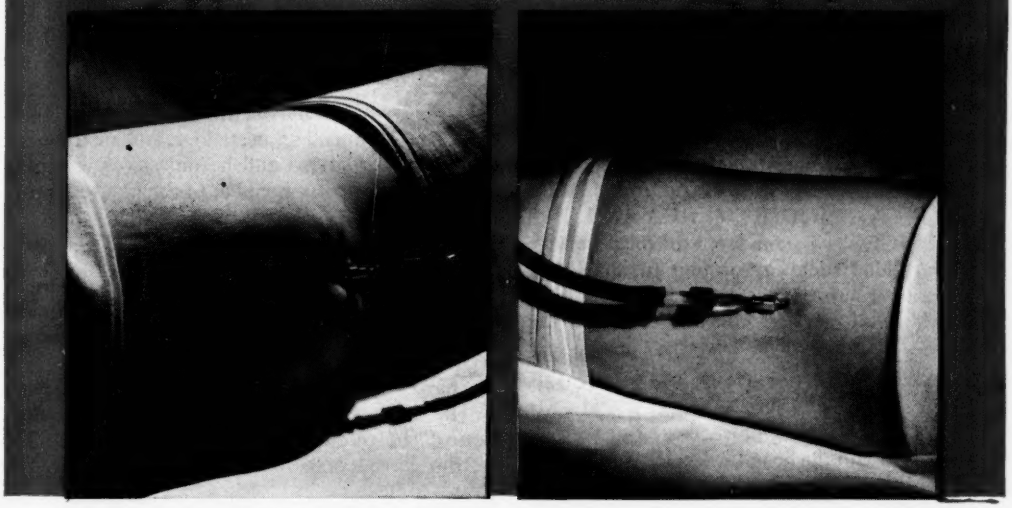
REPORTS OF COMMITTEES

Committee on Annual Meeting

In the absence of Dr. Gerber, Chairman of the Committee on Scientific Work and Annual Meeting, Dr. Morgan Cutts read his report which included a recommendation that the mid-winter

continued on page 332

NOW...
Hypodermoclysis at Intravenous Speed



WITHOUT ALIDASE
Swelling . . . Pain . . . Slow Absorption

WITH ALIDASE
Comfort . . . Safety . . . Rapid Absorption

The procedure of administering fluids or drugs by hypodermoclysis frequently has been handicapped by slowness of absorption, distention and trauma to tissue and pain at the site of injection. Now these difficulties can be overcome by the concomitant use of a product of Searle Research . . . ALIDASE.

Alidase offers a highly purified, well-tolerated form of hyaluronidase—the specific enzyme which reduces intercellular resistance by hydrolyzing the tissue "cement" (hyaluronic acid).[1]

RAPID ABSORPTION—Research has shown[2,3] that the simultaneous use of the enzyme increases the rate of fluid absorption *"twelvefold."*

SAFETY—"There is little effect on the blood pressure and on the respiration in five hundred times the therapeutic dose. The changes in the viscera at this dosage level are not significant."[3]

TOLERANCE, COMFORT—With Alidase pain and swelling of hypodermoclyses were greatly reduced.[4]

The recommended dose is 250 viscosity units for a hypodermoclysis of 500 to 1,000 cc. Lesser amounts may be used for administration of drugs subcutaneously or smaller hypodermoclyses.

It may be: (a) injected through the wall of the rubber tube near the needle, (b) at the site of injection prior to hypodermoclysis or (c) dissolved directly in the solution (when the amount of fluid to be injected is small). Alidase is supplied in ampuls of 250 viscosity units.

REFERENCES:

1. Meyer, K.: Physiol. Rev. *27*:335 (July) 1947.
2. Sannella, L. S.: Yale J. Biol. & Med. *12*:433 (March) 1940.
3. Seifter, J., and Christian, J. J.: Presented at the New York Academy of Science in the Section of Biology, (Dec. 4) 1948.
4. Schwartzman, J.; Henderson, A. T., and King, W. E.: J. Pediat. *33*:267 (Sept.) 1948.

Alidase*

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HOUSE OF DELEGATES

continued from page 330

meeting of the Society be held whenever possible outside Providence and also that it be held early in December.

It was moved that the report of the committee be accepted and that the recommendations incorporated in it be adopted. The motion was seconded and adopted.

Health Insurance Committee

Dr. Rocco Abbate submitted the report of the Health Insurance Committee which included the following recommendations:

1. That the House of Delegates of the Rhode Island Medical Society authorize the formation for the Society of a RHODE ISLAND MEDICAL SOCIETY PHYSICIANS SERVICE, as a non-profit medical service corporation; such corporation to include in its membership representatives of the public, the hospital service corporation, and the Rhode Island Medical Society.
2. That such corporation, the RHODE ISLAND MEDICAL SOCIETY PHYSICIANS SERVICE, be requested to seek an affiliation with the hospital service corporation (Blue Cross) whereby enrollment and other designated procedures may be undertaken by it.
3. That the RHODE ISLAND MEDICAL SOCIETY PHYSICIANS SERVICE, if unable to secure a satisfactory affiliation with the hospial service corporation, be requested to report to this House of Delegates how it can carry out all the functions of a non-profit corporation including the business procedures.

Dr. Abbate moved that the House approve the recommendations of the committee. The motion was seconded.

Discussion

There was discussion by members of the House regarding Blue Cross participation in the Rhode Island Surgical Plan. Dr. Joseph C. O'Connell reviewed the meeting held with Blue Cross representatives in January at which a proposal was made for separate corporations by the Health Insurance Committee of the Society. He reported on the work of the committee since the January meeting and then read a statement which he had given to Blue Cross representatives at a meeting held at the Medical Library on April 25, 1949.

He then read a letter he had received on April 27th from the Blue Cross which stated it was ready to give consideration to the two corporation plan but wished a statement from the Society as to whether the Society would request the Blue Cross to be the exclusive agent of the policy, and secondly of the arrangements to be made for osteopathic physicians to participate. (These statements and recommendations are made a part of the complete official minutes of the House.)

There was continued general discussion on the entire problem with members of the Health Insurance Committee answering inquiries. (The detailed report of this discussion is a part of the official minutes of the meeting on file with the secretary.)

Dr. Harrington moved for a vote on the question. Dr. O'Connell requested Dr. Abbate to reread the recommendations and he did so. A vote was taken with all but one member of the House approving the recommendations.

Cash Sickness Compensation Committee

In the absence of Dr. Herman C. Pitts, Chairman of the Advisory Committee to the State Department of Employment, Dr. Albert H. Jackvony read the report of the committee.

The report was briefly discussed and Dr. Peter F. Harrington moved its acceptance and the adoption of the recommendations included in it. The motion was seconded and carried.

Cancer Committee

Dr. George Waterman, Chairman of the Cancer Committee, read the report which had been submitted in mimeographed form to each member of the House of Delegates. This complete report is made a part of the official minutes of the meeting. There was general discussion of the proposals incorporated in the report after which it was moved that the report be accepted and the recommendations approved.

The motion was seconded and adopted.

Committee on Vocational Rehabilitation

Dr. Henry J. Hanley read the report of the Committee on Vocational Rehabilitation which included the recommendation for the adoption of a limited schedule of fees for medical and surgical procedures for benefits under the adult rehabilitation division of the State Department of Education. There was discussion of the report in which it was pointed out that the schedule of fees was similar to the V A schedule which had never been approved by the Society. It was also pointed out that the society's schedule for fees had not been approved by the V A. There was discussion of the advisability of drafting a uniform fee schedule for all wards of the government.

Dr. Harrington moved that the House of Delegates not approve the report of the Committee on Vocational Rehabilitation as regards the adoption

continued on page 334

"a summation of activity"

Council on Pharmacy and Chemistry, A.M.A.
J.A.M.A. 137:789 (June 26) 1948.

In Tincture Mercresin,* secondary amyltricresols and orthohydroxyphenylmercuric chloride "supplement each other so that the mixture is approximately twice as germicidal for Staphylococcus aureus as the component cresol derivatives alone and seven to ten times as germicidal as the mercury compound alone."



Mercresin combines this *germicidal* potency with *bacteriostatic* and *fungicidal* properties for

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3. topical application to mucous membranes, and
4. prophylactic surgical preparation of intact skin.

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HOUSE OF DELEGATES

concluded from page 332

of the fee schedule. The motion was seconded and adopted.

Dr. Charles J. Ashworth moved that a committee be appointed that would include representatives from the various committees of the society concerned with government programs, both state and federal, such committee to draft a uniform fee scheduled for wards of the government which shall be submitted to the House of Delegates for consideration. The motion was seconded and adopted.

Medical Economics

Dr. William P. Davis, Chairman of the Committee on Medical Economics, read his report. It was moved that the report be accepted and placed on file. The motion was seconded and adopted.

Committee on the Library

In the absence of Dr. Herbert Partridge, Chairman of the Library Committee, the Secretary read the suggestions incorporated in the committee's report that, when possible, clerical assistance be secured to finish the work of cataloging the books in the Library. Dr. Cutts moved that this suggestion be referred to the Council of the Society. The motion was seconded and adopted.

Committee on Benevolence

Dr. David Freedman, Chairman, read the report of the Benevolence Committee which had been submitted in mimeographed form in advance to each member of the House. He amplified the report with extemporaneous remarks relative to the work of the committee. Dr. Freedman moved that the Committee on Benevolence be authorized to continue its work and that the recommendations in its report to the House of Delegates be adopted. The motion was seconded and carried.

Public Relations Committee

Dr. Charles L. Farrell read the annual report of the Committee on Public Policy and Relations. He amplified his report with extemporaneous remarks regarding recent stories in the newspapers, in particular those relating to the Rhode Island Cash Sickness Program. On a motion the report was accepted and placed on file.

Miscellaneous business

The Secretary reported the receipt of a communication from the State Director of Labor that he plans to appoint Dr. John F. Kenney of Pawtucket to fill out the unexpired term on the Advisory Committee to the State Curative Center of Dr. A. H. Ruggles. The House of Delegates on a voice vote approved the action to be taken by the State Department of Labor.

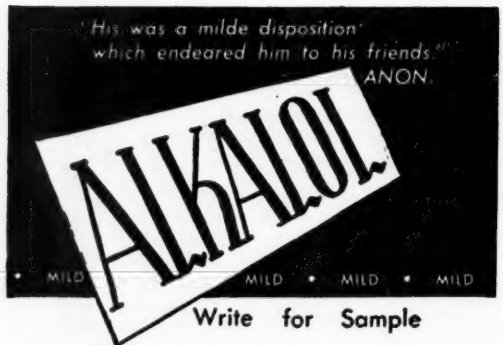
Treasurers Report

Dr. Charles J. Ashworth read his annual report, copy of which had been submitted in mimeographed form to the House of Delegates in advance. The motion was made that the report be accepted and approved. The motion was seconded and adopted.

The meeting adjourned at 10:50 p. m.

Respectfully submitted,

MORGAN CUTTS, M.D., *Secretary*



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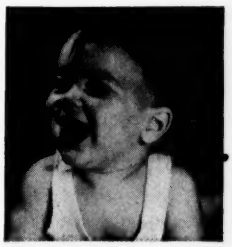
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**Goat's milk and processed cows' milk have unmodified casein factors.*

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DISTRICT MEDICAL SOCIETY MEETINGS

WOONSOCKET MEDICAL SOCIETY

The first Spring meeting of the Woonsocket District Medical Society was held at the Club Canadien on the 26th of April, 1949. The meeting was called to order by President Thomas J. Lalor, M.D. at 9:20 P.M. Minutes of the last regular meeting and subsequent special meeting were read and approved. The Secretary read the following resolution to the assembly:

"WHEREAS, J. Edgar Tanguay, M.D. has devotedly practiced medicine in this community for fifty years, BE IT RESOLVED that the Woonsocket District Medical Society extend to him its congratulations and sincere thanks for his faithful service rendered to the profession."

A motion was made by Francis J. King, M.D. that the resolution be accepted. This was seconded by E. L. Tremblay, M.D. and unanimously approved. President Thomas J. Lalor then presented Dr. Tanguay with a bronze plaque upon which a suitable inscription is to be placed and Dr. Tanguay responded with a short resumé of some of his experiences in his early days of practice.

A resolution concerning the proposed compulsory health insurance legislation was presented as follows:

WHEREAS, under a system of free enterprise, the American medical profession has established the world's highest standard of scientific performance, treatment, and research, thereby helping the United States to become the healthiest major nation in the world; and

WHEREAS, the benefits of American medicine are available to the people of this country through budget-basis voluntary health insurance, the best health insurance which exists in the world; and,

WHEREAS, the experience of all countries where government has assumed control of medical services has shown that there has been a gradual erosion of free enterprise and a progressive deterioration of medical standards and medical care to the detriment of the health of the people, NOW, THEREFORE,

BE IT RESOLVED, That the Woonsocket District Medical Society does hereby go on record against any form of compulsory health insurance or any system of political medicine designed for national bureaucratic control;

That a copy of this resolution be forwarded to the President of the United States, to each Senator and Representative from the state of Rhode Island, and that said Senators and Representatives be and are hereby respectfully requested to use every effort at their command to prevent the enactment of such legislation.

It was then voted that the Society go on record as opposing this legislation and the Secretary was appointed to send copies of said resolution to the President and the Rhode Island Senators and Representatives.

There was a brief discussion of the ten dollar insurance fee as established by the Rhode Island Medical Society.

The meeting was adjourned at 10:00 P. M. and a buffet luncheon was served.

Attendance at the meeting was 23.

Respectfully submitted,

ALFRED E. KING, M.D., *Secretary*

KENT COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Kent County Medical Society was held April 26, 1949, at the office of Dr. Peter C. Erinakes.

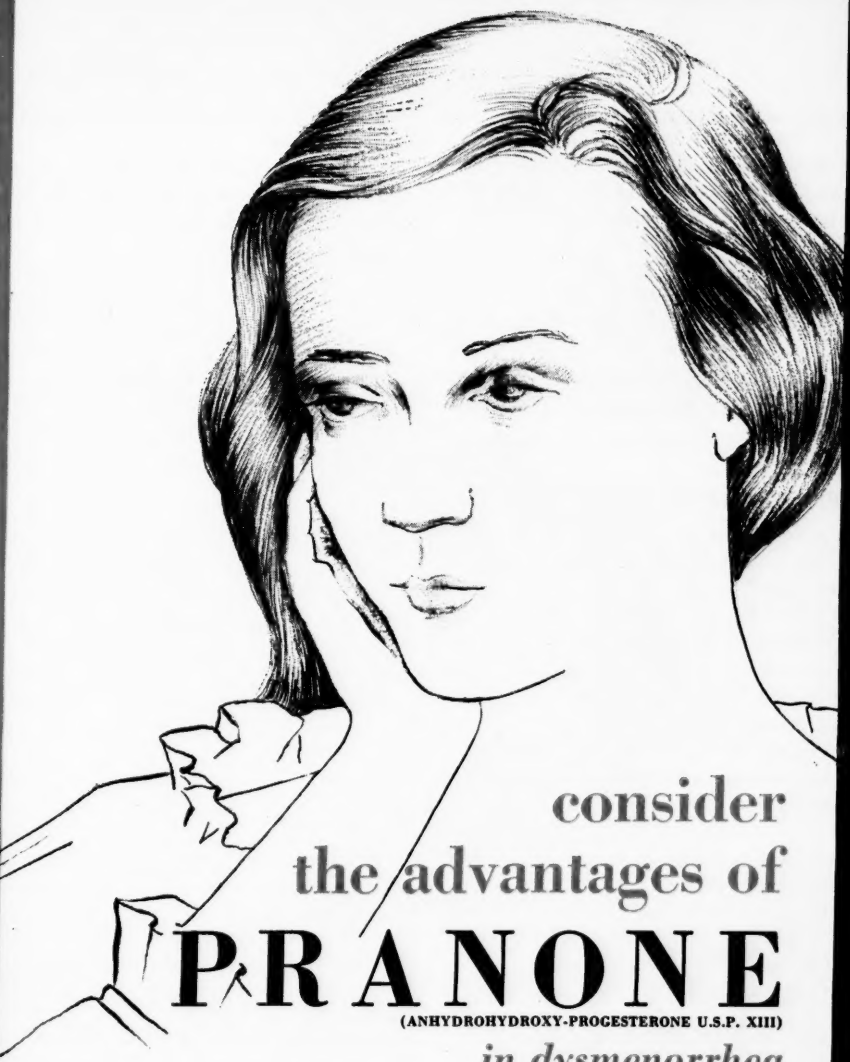
The meeting was called to order at 9:15 p.m. by the president and the Secretary's report of the March meeting was read and accepted.

Dr. Francis D. Lamb, vice-president of the Society, sent a letter requesting a two year leave of absence because of his appointment as a Fellow in Internal Medicine at the Lahey Clinic in Boston. The Society approved the granting of this leave of absence. The president, Dr. Hardy appointed Drs. Taggart, Hudson and Erinakes as a nominating committee to nominate a vice-president to fill Dr. Lamb's unexpired term.

Dr. Joseph E. Wittig announced that West Warwick would in the near future conduct a chest survey campaign and he requested that the Kent County Medical Society go on record as approving this campaign. The Society voted unanimous approval of the West Warwick campaign for the detection of tuberculosis.

The Treasurer reported the name of a member who has not paid his dues and consequently is not a member in good standing.

continued on page 338



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PRANONE* is clinically effective, affording relief in the majority of cases of dysmenorrhea.

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PRANONE therapy is physiologic, aiming at correction of the responsible hormonal imbalance.

"This compound . . . has been shown to have progestomimetic activity when administered orally in immature rabbits, and to produce in human beings a progestinal effect on the estrogen-primed endometrium."[2]

PRANONE therapy is simple and convenient for both patient and physician.

"The oral method saved the time of both the patient and the doctor. Numerous trips to the office . . . were unnecessary when tablets of pregneninolone [PRANONE] were given . . . the cost of six to ten days' treatment was much less."[3]

DOSAGE: PRANONE 10 to 25 mg. daily for eight to ten days preceding the expected date of menstruation. Occasionally higher doses may be required.

PACKAGING: PRANONE, Anhydrohydroxy-progesterone U.S.P. XIII, is available in tablets of 5 or 10 mg. Boxes of 20, 40, 100 and 250 tablets. Also 25 mg.; boxes of 20 and 100 tablets.

BIBLIOGRAPHY: 1. Soule, S. D.: J. Clin. Endocrinol. 1:567, 1941. 2. Greenblatt, R. B.; McCall, E., and Torpin, R.: Am. J. Obst. & Gynec. 42:50, 1941. 3. Harding, F. E.: Am. J. Obst. & Gynec. 50:56, 1945.

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KENT COUNTY MEDICAL SOCIETY

continued from page 336

Following the business meeting Dr. Robert R. Baldridge gave a brief resumé of the history of the medical treatment of tuberculosis particularly in regard to the genito-urinary tract. He gave the case history, illustrated with lantern slides of a case of genito-urinary tuberculosis treated with streptomycin and moolgra. Dr. Baldridge was assisted by Dr. Young of the Rhode Island Hospital who explained the bacteriology of this case.

Respectfully submitted,

JOSEPH C. KENT, M.D., *Secretary*

PROVIDENCE MEDICAL ASSOCIATION

A regular meeting of the Providence Medical Association was held at the Rhode Island Medical Society Library on Monday, May 2, 1949. The meeting was called to order by the President, Dr. George W. Waterman, at 8:30 p.m.

The Secretary read the minutes of the preceding meeting which were approved and placed on file.

The Secretary read a communication from Dr. William N. Hughes of Providence inviting members of the Association to attend a Symposium on Military Medicine at the Medical Library on May 4.

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The Secretary reported for the Executive Committee as follows:

1. Reimburse the Rhode Island Medical Journal for the expense of printing the special reprints in connection with the Centennial of the Association in 1948.
2. To send greetings to the Wayne County (Detroit) Medical Society on the occasion of its Centennial Celebration.
3. To appropriate the sum of $150 for use by the Entertainment Committee in connection with the Association's annual dinner in 1949.
4. Approved reports from the committees on a central telephone exchange and on health and accident insurance.
5. Voted to authorize the President of the Association to appoint a committee to report a plan for the proper indoctrination of new members into the Providence Medical Association.

The report was accepted.

Dr. Troppoli reported that the Executive Committee recommended for election to active membership in the Association Dr. Leroy W. Falkinburg, whose address is the Roger Williams General Hospital in Providence. On a motion from the floor Dr. Falkinburg was unanimously elected an active member of the Association.

Dr. Waterman introduced as the first speaker of the evening Dr. William Sullivan, manager of the Providence Veterans Administration Hospital. Dr. Sullivan gave us a description of the new Veterans Hospital. He said the location of the hospital was ideal, high and close to the business section of the city. The sixth and seventh floors are devoted to surgery. The fifth floor is divided medical and surgical on a fluid basis depending on demand. The fourth floor is a medical one. On the third floor are located the tuberculosis, and neurological sections. Neurosis cases, physical medicine, and x-ray occupy the second floor. On the first floor are located the Dental Clinics and the laboratories which are the best Dr. Sullivan has seen.

The square building behind the main one is designed for services, but has dining rooms, cafeterias, etc.

A library of five thousand volumes, as well as a medical library, is located on the first floor.

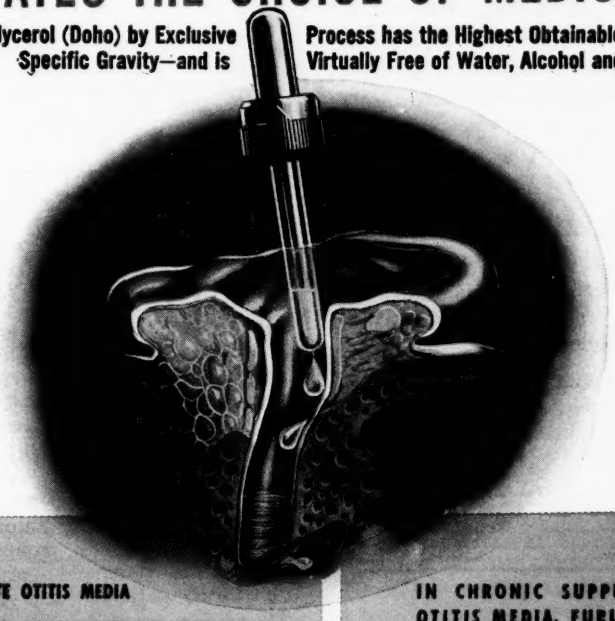
Fifty per cent of the beds are located in four bed rooms. Twenty-eight per cent are two bed rooms, and twenty-two per cent are single rooms.

The second speaker of the evening was Dr. Charles J. Ashworth, a member of the Committee on Public Policy and Relations of the Rhode Island Medical Society, who discussed Socialized Medicine. Dr. Ashworth began his discussion of Socialized Medicine by quoting Dr. Lahey who feels strongly that compulsory health insurance will dis-

continued on page 340

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FORMULA:

Glycerol (DOHO)	17.90 GRAMS
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Antipyrine	0.81 GRAMS
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...a potent chemical combination *(not a mere mixture)*, combining Sulfathiazole and Urea in AURALGAN Glycerol (DOHO) Base—because it exerts a powerful solvent action on protein matter, liquefies and dissolves exuberant granulation tissue, cleanses and deodorizes, and tends to exhilarate normal tissue healing in the effective control of chronic suppurative otitis media.

FORMULA:

Urea	2.0 GRAMS
Sulfathiazole	1.6 GRAMS
Glycerol (DOHO) Base	16.4 GRAMS

Literature and samples sent to physicians on request.

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PROVIDENCE MEDICAL ASSOCIATION

continued from page 338

integrate the quality of medicine. All doctors are in favor of getting the most medical care to the most people.

Ewing's National Health Forum considered that contributory insurance should be the basic form for providing medical care, but Ewing wants to regiment the medical profession, and for evils primarily economic, since food, clothing, housing, and sanitation, all enter into the problem.

The government is doing a wasteful and inefficient job in running its departments, particularly the postal service; will it be more efficient in running the health insurance? The government is seeking to furnish by contract what it cannot furnish, viz., medical care. Economic conditions can be attacked with less expense than medical care.

The coverage of the plan is limited to employed people. The unemployed and the poor have no provision in this plan. Those sick with mental disease also are not included.

The greater the individual income, the greater the tax he pays. Therefore, the only one who benefits is the low income individual. Ewing's plan does not correct any existing evils, fails to provide for the unemployed, excludes those with mental disease, and cannot increase any existing facilities. The poor will still be the responsibility of welfare agencies.

After Dr. Ashworth's presentation Dr. Morris Botvin, chairman of the Committee on Public Relations of the Providence Medical Association, presented the following resolution:

WHEREAS the American medical profession has established the world's highest standard of scientific performance, treatment, and research, thereby helping the United States to become the healthiest major nation in the world; and

WHEREAS, the benefits of American medicine are available to the people of this country through budget-basis voluntary health insurance, and,

WHEREAS, the experience of all countries where government has assumed control of medical services has shown that there has been a progressive deterioration of medical standards and medical care to the detriment of the health of the people, NOW, THEREFORE,

BE IT RESOLVED, That the Providence Medical Association does hereby go on record against any form of compulsory health insurance or any system of political medicine designed for national bureaucratic control:

That a copy of this resolution be forwarded to the American Medical Association to each Senator and Representative from the state of Rhode Island, and that said Senators and Representatives be respectfully requested to use every effort at their command to prevent the enactment of such legislation.

The motion was made, seconded, and carried that the resolution be adopted.

There was general discussion by members of the question of socialized medicine.

The meeting adjourned at 11:15 p.m.

Collation was served.

Attendance was 122.

Respectfully submitted,

DANIEL V. TROPPOLI, M.D., *Secretary*

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THE CALEB FISKE FUND

Report of the Trustees of the Caleb Fiske Fund to the Rhode Island Medical Society, May 12, 1949

CALEB FISKE, one-time President of this Society after a long and honorable lifetime as a practicing physician in Rhode Island, died in 1834 leaving a will containing unusual provisions some of which, with your indulgence, I should like to quote.

"Item: I give and bequeath to the president and two vice-presidents of the Medical Society of the State of Rhode Island for the time being, and to their successors in office, the semi-annual dividends arising from forty shares of stock which I own in the Union Bank in Providence, the amount thereof two thousand dollars, in trust for the uses herein limited. Use: the first nine twelfths of such dividends shall constitute a fund to be applied in the manner following, to wit: The said trustees, or either two of them, shall select at every annual meeting of said society such subject or subjects for investigation as they may judge most conducive to the advancement of medical science . . . offering such premium or premiums as the annual product of such fund will justify, to be awarded and paid by said trustees for the best treatise on the subject proposed by them for investigation, to be communicated to said trustees one month previous to the next annual meeting of said society; and in order that a laudable spirit of emulation may be excited and maintained, the trustees shall not only suitably reward the authors of the fortunate productions, but also prescribe such rules for receiving the communications, and deciding on the merits of the several preferences, as will shield the unsuccessful competitor from obloquy or reproach.
Use: the second two twelfths of the profits or dividends of said stock is to remain at said trustees for their services in execution of the several trusts herein confided to them.
Use: the third one twelfth of the profits of said stock is to be appropriated to printing and supplying each member of said society with a copy of such treatises for which premiums shall have been awarded."

As a result of this unique bequest, a long succession of treatises has been published, some of them of doubtful or very fleeting importance, and some of very real value in the advancement of our Art.

In 1892, by careful management and by returning their emolument regularly to the main fund, the Trustees had increased it to one hundred and ninety five shares; and a court order was entered allowing the sale of these shares and the deposit of the resulting funds, by now amounting to $8,000, in the Rhode Island Hospital Trust Company in a savings account. For many years this arrangement, resulting in an annual income of reasonable proportions, worked well in carrying out the purpose intended by Dr. Fiske.

When I became Secretary to the Trustees, twenty one years ago, the Fund had reached the amount of $11,560. and the annual income was almost four hundred and fifty dollars. With the decline of interest rates in the early nineteen forties, however, this income dropped to about ninety dollars; and in 1941 the activities of the Fund were suspended because of lack of funds. Several attempts at changing the manner of investment were made but were unsuccessful, and the all too-familiar "dead hand" provisions of the will and the later court order defeated their very purpose.

Last year, however, the Trustees were successful in obtaining a new decree from the Superior Court authorizing them to withdraw the Fund from the bank, and to re-invest them "with the same rights, powers and privileges as trustees of a trust created at the present time would have under the laws of this state." Recognition of the President-elect as taking the place of one of the Vice-Presidents was also made.

With this authorization, the present Trustees, Dr. Joseph O'Connell, Dr. Peter Pineo Chase, and Dr. Edgar Potter have invested the Fund, now amounting to $13,000. in United States Government Bonds from which an annual income of somewhat over three hundred dollars is obtained; and, with funds once more available, have directed resumption of the proper activities of the Fund.

Accordingly, they have voted "that a Premium of Two Hundred Dollars be offered for the best Treatise to be submitted, before April 2, 1950, on the subject—

"The Present Status of the Treatment of Peripheral Vascular Diseases."

the conditions governing the Competition to remain the same as those prescribed in the years prior to the suspension of activity of the Fund." These conditions will be published in an Announcement in an early issue of our Medical Journal.

WILFRED PICKLES, M.D.
Secretary to the Trustees.



Further evidence of the safety of Benzedrine Sulfate therapy

More data, showing that Benzedrine Sulfate, in proper dosage, produced no toxic effects, have lately been published in a study by Caveness.[1]

He gave the drug for 14 consecutive weeks to 23 unselected hospital patients whose ages *averaged 65 years.* Daily dosages over the period ranged from 5 to 30 mg. The author observes:

"... no significant changes were noted in the cardiovascular, urinary, hematopoietic, or respiratory systems..."

From this study, it would appear that Benzedrine Sulfate may be safely used in the treatment of depression in the aged.

1. New York State J. Med. 47:1003

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WOMAN'S AUXILIARY

to the

RHODE ISLAND MEDICAL SOCIETY

Report of THIRD ANNUAL CONVENTION, *May 11, 1949*

THE THIRD ANNUAL LUNCHEON MEETING of the Woman's Auxiliary to the Rhode Island Medical Society was held in the Auditorium of the Plantations Club on May 11, 1949 at 12:30 o'clock.

Dr. Joseph C. O'Connell, President of the Rhode Island Medical Society, extended greetings to the Auxiliary from the Rhode Island Medical Society. He congratulated and thanked the women for their splendid work during the year, and urged them to seek representation on health groups and be prepared to assist in defeating resolutions approving of compulsory health insurance in the State and Nation.

Mrs. John S. Wheeler, President of the New Hampshire Auxiliary, brought greetings from that State.

Our guest speaker for the day, Dr. Joseph S. Lawrence, Director of the Washington Office of the A.M.A. gave a very interesting and informative address on "Can Political Medicine Replace Private Practice". Dr. Lawrence outlined briefly the Bills now before the Congress. He, also, urged the doctors' wives to assist in every way possible in defeating the Compulsory Health Insurance Plan. He congratulated our Legislative Committee Chairman for her splendid up-to-the-minute report.

Following the Luncheon, the business meeting was held.

The Secretary's report of the previous meeting was approved as read.



The Secretary's annual report was read. Mrs. Herbert E. Harris moved that the report be accepted. Mrs. Robert T. Henry seconded the motion. The motion was carried.

The Treasurer, Mrs. Jesse P. Eddy 3rd, reported a balance on hand as of April 30, 1949 of $1,318.54, with a membership of 296. A motion was made by Mrs. Elihu S. Wing and seconded by Mrs. Paul C. Cook that this report be placed on file. The motion was carried.

The following recommendation of the Board was read by the Secretary: The reports of chairmen of Standing Committees were read at the last Board Meeting, and it was recommended that these reports be accepted as presented as a unit. A motion was made by Mrs. Herbert E. Harris and seconded by Mrs. Paul C. Cook that the reports of the Standing Committees be accepted as a unit. The motion was carried.

The Secretary read the following recommendation of the Board: The Board of Directors recommends that the two Lilian Winsor Harris Scholarships for Nurses Training of one hundred and sixty dollars ($160.00) each be awarded for the year 1949-1950 to the Newport Hospital School for Nursing and the Rhode Island Hospital School for Nursing. A motion was made by Mrs. Charles L. Farrell and seconded by Mrs. Jesse P. Eddy 3rd that the recommendation of the Board be approved. The motion was carried.

Mrs. Charles L. Farrell, Vice President took the chair while Mrs. J. Murray Beardsley, President, read her report. Mrs. Beardsley reviewed briefly our activities for the past year and said that it is her earnest hope that the Woman's Auxiliary take part in President Truman's 1950 White House Conference on Child Welfare by making a study of child health one of its major interests this coming year. A motion was made by Mrs. Herbert E. Harris and seconded by Mrs. Elihu S. Wing that this report be accepted. The motion was carried.

Election of Delegates to the A.M.A. Convention followed. Three delegates and three alternates were to be chosen. The following members signified their intention of attending the Convention: Mrs. Robert T. Henry, Mrs. Charles J. Ashworth,

continued on page 347

WOMAN'S AUXILIARY

concluded from page 344

Mrs. Daniel V. Troppoli, Mrs. Charles L. Farrell, Mrs. Jesse P. Eddy 3rd.

Ballots were passed out for the election of the Nominating Committee members and the Delegates to the A.M.A. Convention. The results of these elections will be announced at a later date.

Mrs. Earl F. Kelly, Chairman of the Nominating Committee, read the report of her committee —

OFFICERS

President.....Mrs. William Newton Hughes
President Elect.....Mrs. Charles L. Farrell
Vice President.....Mrs. Joseph C. Johnston
Secretary.....Mrs. Edward V. Famiglietti
Treasurer.....Mrs. Stanley D. Davies

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Pawtucket.....Mrs. J. Lincoln Turner
Woonsocket.....Mrs. James P. O'Brien
Newport.....Mrs. Alfred Tartaglino
Kent.....Mrs. Joseph C. Kent
Bristol.....Mrs. Ernest K. Landsteiner
Washington.....Mrs. Joseph H. Ladd

The President asked for further nominations from the floor. As there were no counter nominations, Mrs. Peter Pineo Chase moved that these officers be elected. Mrs. Herbert E. Harris seconded the motion. The motion was carried. The Secretary cast one ballot electing these officers.

Mrs. J. Murray Beardsley presented the gavel to the new President, Mrs. William Newton Hughes, and wished her and the organization a successful year.

Meeting adjourned at 3:10 o'clock.

Respectfully submitted,

MARGARET E. HANLEY, *Secretary*

Benedict-Roth Metabolism Apparatus made by Collins of Boston. Little used, appears new. Will sell at half price ($150.00). May be seen at 134 Francis St. near Medical Library daily except Thursday.



1949 LEGISLATIVE SESSION EFFECTS MANY CHANGES IN R. I. UNEMPLOYMENT AND SICKNESS BENEFIT LAWS

THE 1949 SESSION of the Rhode Island General Assembly passed much legislation affecting the Department of Employment Security and the programs which it administers. Therefore, this issue of the Monthly Bulletin is being devoted to a summary of this legislation and an explanation of the changes which are involved.

Chief among the acts passed was that which abolished the Rhode Island Unemployment Compensation Board and created in its place the Department of Employment Security headed by an administrator. This law is known as the Employment Security Act. Amendment to the Rhode Island Cash Sickness Compensation Act placed the administration of Rhode Island's Cash Sickness program also in the Department of Employment Security.

A Board of Review, consisting of three members representing the public, labor and industry was established by the Employment Security Act. This Board is the appeals body under the law for adjudication of all appeals, both as to the status of employers and the eligibility of claimants. To it are referred all such appeals and its decisions, under the law, are final and binding unless judicial review is sought in the Superior Court.

Reprinted from the Monthly Bulletin of the Department of Employment Security, State of Rhode Island. Vol. II, No. 12, April, 1949

The new law also provided for appointment by the Governor of one State Advisory Council to aid the department in formulating policies and solving problems relating to the administration of the Employment Security and Cash Sickness Compensation Acts and in assuring impartiality, neutrality, and freedom from partisan influence in the solution of such problems.

An Advisory Council appointed by the Unemployment Compensation Board has functioned since July of 1948, and made many recommendations to the Board which were adopted. It also originally proposed much of the legislation here discussed. However, this advisory group served at the request of the Board. The new Advisory Council, provided for by act of legislature and appointed by the Governor, is empowered to take under advisement matters pertaining both to the Unemployment and the Cash Sickness programs.

The following comparative list will serve to point out the differences between the Rhode Island Unemployment Compensation Act and the Rhode Island Employment Security Act as they refer to items of general interest. In the same manner, the second list will illustrate changes brought about by amendment of the Rhode Island Cash Sickness Compensation Act.

SUBJECT	RIUC ACT	EMPLOYMENT SECURITY ACT
Old Age Benefits received under Title II of the federal Social Security Act.	Monthly old age benefits were pro-rated on a weekly basis and deducted from the weekly amount of Unemployment Compensation benefits. Thus, while the claimant suffered no loss of total benefits, payments were made over an extended period because of the reduction in the weekly amount.	Benefits received under Title II of the federal Social Security Act are no longer deductable and receipt of these benefits will in no way affect the benefits paid under the Employment Security Act.
Last day of benefit year.	The last Saturday preceding the first Sunday of April of a calendar year.	When the last day of a benefit year falls within a week of compensable unemployment, the benefit year shall be extended until the completion of that week.

continued on page 351

LEGISLATIVE CHANGES IN R. I. UNEMPLOYMENT AND CASH SICKNESS LAWS

concluded from page 348

SUBJECT	RIUC ACT	EMPLOYMENT SECURITY ACT
Definition of "Week".	Calendar week or equivalent thereof, as determined in accordance with regulations prescribed by the Board.	Such period of seven consecutive days as the Board may, by regulation, prescribe (Pending Governor's signature). (A flexible week of seven consecutive days had been adopted by regulation.)
Merit Rating.	Modified tax rates were allowed when, on April 1, of any year, the reserve ratio of the total amount available for the payment of benefits was 8% or more of the total taxable payroll for the preceding calendar year. When the reserve ratio fell below 8% the standard tax rate of 2.7% was mandatory.	Modified rates varying from 2.1 to 2.7% are allowed for the last six months of 1949 if the reserve ratio on April 1, 1949, equals or exceeds 7% of the total taxable payroll for 1948. (A comprehensive study of the merit rating structure is proposed. This legislation was designed to relieve employers of the possibility of being placed in an unfair competitive position by the imposition of a general rate of 2.7%).
Payment of benefits when date for payment falls on a holiday.	No provision.	When the day for the payment of benefits falls on a holiday, benefits shall be paid the day before such holiday or, at the discretion of the Administrator, on the day following the holiday.
Benefits.	Minimum benefits $6.75 for 5+ weeks. Maximum benefits, $18.00 for 20 weeks.	Minimum benefits $10.00 for 5+ weeks. Maximum benefits, $25.00 for 26 weeks. (This change enables the agency to use a uniform table for the computation of both Unemployment and Cash Sickness Benefits).
Combined benefits under Cash Sickness and Workmen's Compensation laws.	No benefits under this act shall be payable to any person in excess of an amount which, when added to any compensation payment for disability under the Workmen's Compensation law of any state, shall equal 90% of the average weekly wage of the employee at his last regular employment prior to the sickness for which he is to receive such benefits; provided, however, that said person is actually receiving said Workmen's Compensation for the weeks for which Cash Sickness Benefits shall be or are being paid.	The percentage figure is reduced to 85%.
Last day of benefit year.	Same as RIUC Act.	Same as Employment Security Act.
Definition of "Week".	Same as RIUC Act.	Same as Employment Security Act.

BOOK REVIEWS

PREOPERATIVE AND POSTOPERATIVE CARE OF SURGICAL PATIENTS, by Hugh C. Ilgenfritz. C. V. Mosby Company, 1948. $10.00

The first edition of Ilgenfritz Preoperative and Postoperative Care of Surgical Patients is an excellent book chiefly because of its painstaking attention to detail in describing various procedures.

The chapters on fluid and electrolytic balance and metabolism and nutrition are presented in an excellent manner. The chapter on sedative medications is adequately covered with a brief mention of various anesthetic agents. The indications for blood transfusion and the discussion of the Rh factor are completely presented. Chemotherapeutic and antibiotic drugs are thoroughly discussed covering the period up to 1948. The chapter dealing with major postoperative complications is excellent and the methods advocated sound. The chapter devoted to intestinal obstruction and peritonitis is especially recommended because of the detailed description of the use of various tubes and their limitations, especially in preoperative therapy. The care of the wound is discussed fully and the problem of the drainage of the wound is carefully evaluated. The chapter on thoracic surgery is clear and concise but rather brief. The volume has many illustrations and all but a few chapters have a satisfactory bibliography. The bibliography could have been arranged in alphabetical order for easier reference.

The book is the most complete treatise on the subject of pre and postoperative care available today and is recommended to surgical interns and residents.

WILFRID I. CARNEY, M.D.

PRACTICAL ASPECTS OF THYROID DISEASE by George Crile, Jr., M.D., F.A.C.S. W. B. Saunders Company, Phil. & London, 1949

This book is designed for all those interested in the problems of thyroid disease. It gives a concise appraisal of what the surgeon, the radiologist, the



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internist, and the physicist can hope to accomplish in the management of diseases of the thyroid gland.

Written by a surgeon whose experience in a region of endemic goiter has been broad, the book points out the increasing need for close cooperation between the internist and the surgeon as well as the advisability of non-surgical therapy in selected cases. The indications and the method of treatment by anti-thyroid drugs, radioactive isotopes, roentgenotherapy, and surgery are given in detail. A discussion of anaesthesia and of surgical technique is included. The book provides a description of the anatomy and physiology in the normal and pathological gland. It is well illustrated with photographs, photomicrographs and diagrams.

Perhaps its greatest value is the analysis of the statistics available to the author and their application to the problem of therapy for the individual patient. These analyses give the reader "ready-made" objective data which only a lifetime of interest in and experience with thyroid diseases could produce.

The book could be expanded to more fully meet the scope of its title if a section were included on myxedema. Those portions of the book on the diagnosis and management of a thyroid crisis should be brought together and more clearly outlined.

The basic knowledge made available by this text should be known or assimilated by every practicing physician or surgeon before he attempts to advise or treat any patient coming to him with thyroid disease.

HERBERT F. HAGER, M.D.

A HISTORY OF THE HEART AND THE CIRCULATION by Frederick A. Willius and Thomas J. Dry. W. B. Saunders Co., Phil., 1948. $8.00

The authors, two well-known clinicians and cardiologists, have attempted to trace the origin of the knowledge relating to the heart and circulation. Many of the original articles and references have been contacted.

There are three main divisions to the book. The first part deals with the presentation of information according to various periods and eras. The second concerns the special biographies of twenty individuals; for example, Einthoven, Osler, Lewis. The final section comprises a chronological listing of data on several varied and different subjects; such as, cardiac arrhythmia, surgery of the heart, coronary vessels and their diseases.

The authors have assembled a remarkable amount of historical and biographical information.

continued on page 355

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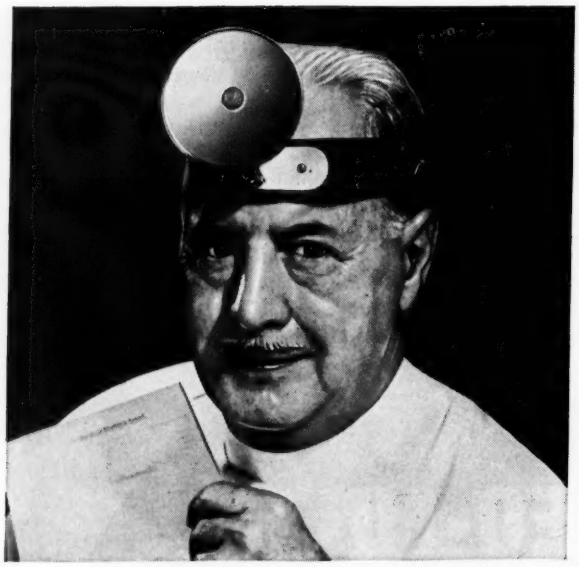
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BOOK REVIEWS

concluded from page 352

Their approach has been characteristically systematic and thorough. Illustrations and portraits are numerous. It should serve as a ready reference book to the original contribution and thoughts on cardiovascular subjects. In addition, its simple style and easy reading make it a book for pleasant extra-curricular perusal.

JOSEPH A. HINDLE, M.D.

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AUGUST

MONDAY through FRIDAY . . . . . 9 a.m. until 1 p.m.

The Library will be closed all day on Saturday, and the evening schedule will be discontinued until mid-September.

HERBERT G. PARTRIDGE, M.D.
Chairman, Library Committee
Rhode Island Medical Society

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